

WHAT IS CLAIMED IS:

1. A V-2 engine comprising:
 - a crankcase;
 - 5 a crankshaft rotatably supported in the crankcase, the crankshaft defining a longitudinal axis;
 - one crankpin disposed on the crankshaft at a position spaced apart from the longitudinal axis;
 - two cylinder blocks each having a cylinder head,
 - 10 the cylinder blocks mounted to the crankcase such that the cylinder blocks are arranged at an angle to each other, the cylinder blocks being offset from each other along the longitudinal axis such that a first connecting rod in the first cylinder block and a second connecting
 - 15 rod in the second cylinder block are capable of being connected in side-by-side fashion to the one crankpin, the engine being air-cooled by fins located on the cylinder head and cylinder blocks;
 - four valve mechanisms mounted to each cylinder
 - 20 head;
 - two camshafts mounted to the cylinder head of each cylinder block;
 - a power transmitting mechanism for transmitting rotational power from the crankshaft to the camshafts to
 - 25 drive the valve mechanisms; and,
 - wherein the crankcase fits onto stock front and rear EVO crankcase mounts and the crankcase mates with stock EVO primary drive and crankshaft mounts.
- 30 2. The engine of Claim 1, wherein the cylinder blocks have a plurality of fins disposed thereon.

3. The engine of Claim 1, wherein two of the valve mechanisms are intake valves.

5 4. The engine of Claim 1, wherein two of the valve mechanisms are exhaust valves.

5. The engine of Claim 1, wherein the cylinder blocks have a bank angle of approximately forty to fifty
10 degrees.

6. A V-2 engine, comprising:
an air-cooled crankcase;
a crankshaft rotatably supported in the crankcase,
15 the crankshaft defining a longitudinal axis;
two crankshaft journals disposed on the crankshaft at a position spaced apart from the longitudinal axis;
two cylinder blocks each having a cylinder head,
the cylinder blocks mounted to the crankcase such that
20 the cylinder blocks are arranged at an angle to each other, the cylinder blocks being offset from each other along the longitudinal axis such that a first connecting rod in the first cylinder block and a second connecting rod in the second cylinder block are capable of being
25 connected in side-by-side fashion to the two crankshaft journals;
four valve mechanisms mounted to each cylinder head, the four valve mechanisms including two intake valves and two exhaust valves;
30 two camshafts mounted to the cylinder head of each cylinder block;

a power transmitting mechanism for transmitting rotational power from the crankshaft to the camshafts to drive the valve mechanisms; and,

5 wherein the crankcase fits onto stock front and rear EVO crankcase mounts and the crankcase mates with stock EVO primary drive and crankshaft mounts.

7. The engine of Claim 6, wherein the cylinder blocks have a bank angle of approximately forty to fifty
10 degrees.